






# BIFACIAL - MONO PERC - 144 Cells

525 Wp | 530 Wp | 535 Wp | 540 Wp | 545 Wp | 550 Wp  
 SGE XXX-144 MBHC (XXX-525-550 Wp)



## Key Features

- 
**High Module Conversion Efficiency**  
 Module efficiency up to 21.2 % achieved through advanced cell technology and manufacturing process.
- 
**Advanced Technology**  
 MBB- Multi Busbar (10BB) / Halfcut MONO PERC cells / Ga Doped Wafers.
- 
**Positive Tolerance Cell Output**  
 Guaranteed 0~+4.99 Wp positive tolerance to ensure Power output.
- 
**Excellent Weak Light Performance**  
 Advanced glass and surface texturing allow for excellent performance in low-light environment.
- 
**Extended Wind and Snow load Tests**  
 Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).
- 
**Excellent PID Resistance**  
 Excellent Anti-PID performance guarantee limited power degradation and certified for up-to 288 Hrs.
- 
**Withstanding Harsh Environment**  
 Reliable quality leads to a better sustainability even in harsh environment like desert, farm and coastline, ammonia.
- 
**Rigorous Testing Criteria**  
 100% EL inspection ensuring defect-free modules.
- 
**Current Sorting**  
 To minimize the current mismatch losses to maximizesystem power output.
- 
**Bifaciality Factor 70 ± 5%**  
 The ratio of rear efficiency in relation to the front efficiency subject to the same irradiance

## Certifications & Standards

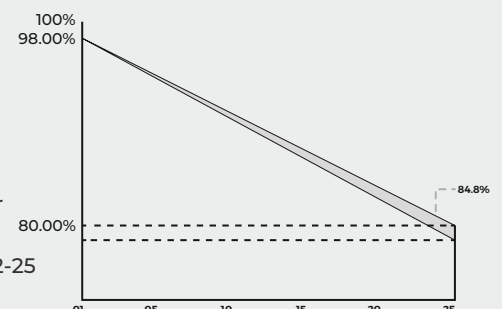
IEC 61215, IEC 61730, IEC 61701,  
 UL 61730 CEC, CEC-Aus, IEC 62716,  
 IEC 62759, IEC 62804, IEC 62782,  
 IEC 60068-2-68, IEC 61853

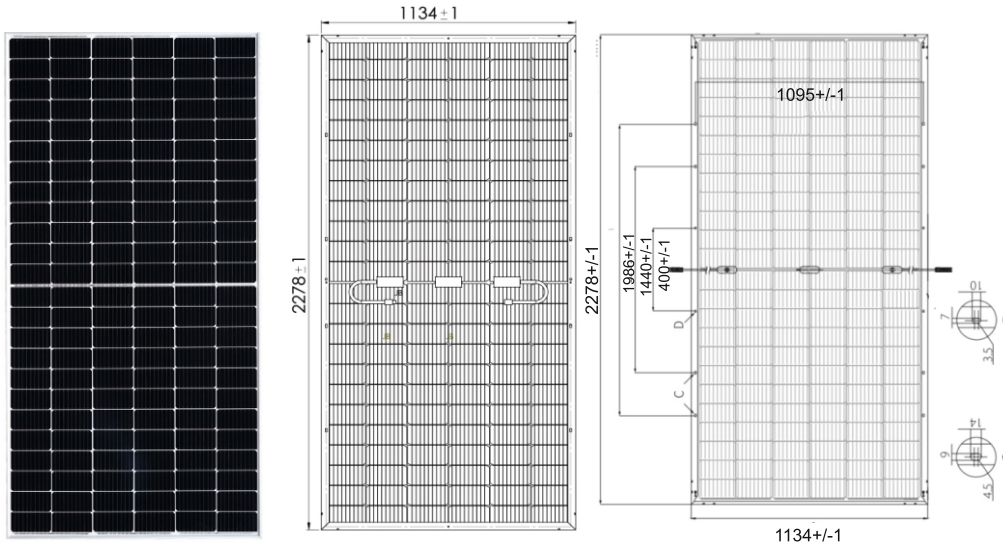
## Certifications



## Linear Performance Warranty

Product Warranty 12 Years :  
 Material & Processing First year  
 Degradation up-to -2.0%  
 Linear power output 25 Years: 2-25  
 Annual Degradation - 0.55%





## ELECTRICAL DATA PERFORMANCE

Conditions	Unit	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Peak Power Pmax(0 ~+ 4.99)	Wp	525	393.2	530	397.5	535	401.3	540	405.0	545	408.8	550	410.96
Maximum voltage	Vmpp	41.34	38.29	41.5	38.48	41.65	38.68	41.8	38.79	41.9	38.8	42.14	28.92
Maximum current	Impp	12.71	10.27	12.78	10.33	12.86	10.39	12.94	10.46	13.03	10.46	13.08	10.56
Open circuit voltage	Voc	49.60	45.94	49.80	46.17	49.98	46.41	50.16	46.54	49.88	46.56	50.58	47.75
Short circuit current	Isc	13.35	10.78	13.42	10.85	13.50	10.91	13.59	10.98	13.66	11.08	13.73	11.09
<b>Module Efficiency (%)</b>		<b>20.34</b>		<b>20.54</b>		<b>20.73</b>		<b>20.92</b>		<b>21.14</b>		<b>21.29</b>	
Operating Temperature (°C)		-40°C~+85°C				Temperature coefficients of Isc				0.027%/°C			
Maximum system voltage		1500 VDC				Nominal operating cell temperature (NOCT)				45±2°C			
Maximum series fuse rating		25A				Fire Safety				Class-C			
Power tolerance		0~+3%				Application				Class-A			
Temperature coefficients of Pmax		-0.34%/°C				Safety Class				Class-II			
Temperature coefficients of Voc		-0.28%/°C											

\*STC Irradiance 1000 W/m2 module temperature 25 °C. Am=1.5; NOCT: Irradiance 800 W/m2, ambient temperature 20°C, Am=1.5, Wind speed 1m/s. Average power reduction of 4.5% at 200 W/m2 as per IEC 60904-1. Measuring Uncertainty +/-3% \*\*Power gain from rear side depends upon the ground reflectance (Albedo) & Bifaciality factor

Bifacial Gain	Measurement	Unit	525	530	535	540	545	550
5%	Max. Power (Pmax)	Wp	550	555	560	565	570	575
	Module Efficiency	%	21.29	21.48	21.68	21.87	22.07	22.26
10%	Max. Power	Wp	575	580	585	590	595	600
	Module Efficiency	%	22.26	22.45	22.65	22.84	23.03	22.25
15%	Max. Power	Wp	600	605	610	615	620	630
	Module Efficiency	%	23.23	23.42	23.61	23.81	24.00	24.17

### MODULE MECHANICAL DATA

#### SPECIFICATION DATA

Cell Type	Half Cut-PERC Monocrystalline, 144Cells
Dimensions	2278X1134X35 mm
Weight	28 kgs
Front Cover	3.2 mm Tempered Glass
Backsheet	Transparent Backsheet
Frame Material	Silver Anodized Aluminium Profile, (black frame on request)
J-Box	IP67, 3 diodes
Cable	350mm, 4mm <sup>2</sup>
Connectors	Mc4 Compatible Connector IEC/UL Certified
Standard Packaging	31 Pieces/Pallet
Module Pieces per Container	620 pieces (40* HQ)

### I-V Characteristics At Different Irradiations

PV module : Saatvik Green Energy Private Limited, SCE545 - 144 MBHC

